

[0019] In another embodiment, the step of generating the page for displaying or playing a multimedia message further includes: parsing the received multimedia message to obtain the presentation structure of said multimedia message; and generating a data model used in the page for displaying or playing said multimedia messages based on said multimedia message presentation structure.

[0020] According to another aspect of the present invention, a user terminal for multimedia message service is provided, adopted to receive multimedia message from a server and process said multimedia message, said user terminal comprises: a device for receiving multimedia message from a server, a device for generating a page for displaying or playing said multimedia message; a device for embedding one or more controllers, between which relationships are defined, into said displayed or played multimedia message; and a device for triggering at least one action event in response to an operation of said one or more controllers, and for implementing the corresponding action.

[0021] According to yet another aspect of the present invention, a communication system for multimedia message service is provided, said system comprising: one or more user terminals; one or more servers for sending a multimedia message to said user terminals, characterized in that said user terminal comprises: a device for receiving a multimedia message from a server, a device for generating a page for displaying or playing said multimedia message; a device for embedding one or more controllers, between which relationships are defined, into said displayed or played multimedia message; and a device for triggering at least one action event in response to an operation of said one or more controllers, and for performing the corresponding action.

[0022] The interactive approach for the multimedia message service according to the present invention, the user terminal and corresponding communication system as well as the corresponding computer program provide a method for generating the value-added message based message for multimedia message providers, a friendly user interface, which enables a more vivid dynamic form to be presented in an optimum manner, for the MMS user, and a more convenient way to send a service request for the MMS user. According to the present invention the user can access more information while the round-trips between the server and the user mobile terminal are reduced without taking up too many system resources or causing latency. According to the present method, the performance of the message service system is improved.

BRIEF DESCRIPTION OF THE DRAWINGS

[0023] Embodiments of the invention will now be described, by way of example only, and with inference to the following drawings:

[0024] FIG. 1 schematically shows a SMS interface presented on a user terminal;

[0025] FIG. 2 schematically shows the message structure of conventional multimedia message;

[0026] FIG. 3 schematically shows a block diagram of a MMS communication system employing the method of an embodiment of the present invention;

[0027] FIG. 4 schematically shows the interactive procedure for the multimedia message service according to an embodiment of the present invention;

[0028] FIG. 5 schematically shows the flow chart of the procedures of the interactive method for the multimedia message service according to an embodiment of the present invention;

[0029] FIG. 6 shows logic models of the interactive controller according to an embodiment of the present invention;

[0030] FIG. 7 shows one of the controllers according to an embodiment of the present invention;

[0031] FIG. 8 schematically shows an example of the interactive multimedia message service implemented according to an embodiment of the present invention;

[0032] FIG. 9 schematically shows a data model of the multimedia message according to an embodiment of the present invention;

[0033] FIG. 10 schematically shows a data model of an exemplary multimedia message illustrated in a method for realizing the interactive approach for multimedia message service; and

[0034] FIG. 11 schematically shows a functional diagram illustrating an middleware process according to the present method.

MODE(S) FOR CARRYING OUT THE INVENTION

[0035] Hereafter a detailed description will be given to embodiments of the present invention with reference to accompanying drawings. It should be understood that the following description enables those skilled in the art to carry out present invention. Various changes and modifications will become apparent to those skilled in the art, and the teachings of the present invention can be applied to other embodiments. The present invention is therefore not intended to be limited to the exemplary embodiments described below.

[0036] Reference is now taken to FIG. 3 which schematically shows a block diagram of a MMS communication system. The MMS communication system is adopted to activate the interactive multimedia message, realizing communication between a user mobile terminal and a server, for example a multimedia message server. A MMS communication system generally comprises of three main parts: a MMS value-added service server 300, a communication network and MMS center (MMSC) 200, and one or more MMS terminals 100. The value-added service server 300 provides and sends multimedia message, and can receive request in message form from the MMS terminal 100. Preferably MMS value-added service server 300 may comprise a communication module 301, a message parser module 302, and one or more service module 303. The communication module 301 is adopted to process various possible communication protocols, for example HTTP or SMTP. The message parser module 302 parses incoming request message, for example, from the MMS terminal 100 to derive the format and content of message to be presented, according to the association information contained in the message header, from the received message, and then passes the request message to a corresponding service modules 303. The service modules 303 are used to process the service logic. The communication network and MMSC 200 can be provided by suitable communication operator. The MMS ter-